

ACTIVITIES STUDIES IN NEW GUINEA VILLAGES

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ABSTRACT

University students, working in their own villages, collected data on how villagers spent their time during the day. There were numerous problems in the exercise but it is believed that such studies not only give some idea of present-day demands of traditional and non-traditional activities, but they also provide a valid interregional comparison on how existing demands can act as a constraint on economic development.

In 7 different villages, 34 different activities were recorded for 320 individuals during a 24-hour day. Most of the day-time activities were recorded to the nearest 10 minutes. Only adults (over 16 years of age) were included in the study and it appears that even the most 'westernised' villages are still tradition-orientated and that, in the light of present needs and village realities, neither sex has excessive leisure time.

INTRODUCTION

DURING the 1968-1969 Christmas vacation, seven university students were employed by the Department of Agriculture, Stock and Fisheries to collect data in their own villages. The study was primarily to collect statistical data on how people spend their time in various activities in their villages, and was a pilot project in the collection of quantitative data for a long-term study of indigenous agriculture being carried out by the Geography Department of the University of Papua and New Guinea. It was also an attempt to tap the cognitive world of the village by using literate villagers to do the field work and to write up the problems of economic and social development from a village point of view.

The students worked in their home villages. They all spoke at least three languages—the local dialect, English and the regional lingua franca (e.g., Pidgin). Villages were distributed over the Territory with examples in the Highlands and in coastal and island areas (Figure 1). They were Malu (near Ambunti), Bilbil (near Madang), Pavaere (near Kieta), Kerapi (near Hoskins), Oba (on Sideia Island), Mintima (near Kundiawa) and Kaiap (near Wabag). Totals in this article refer to all these villages although data for only Bilbil, Pavaere, Oba, Mintima and Kaiap are presented in any detail.

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METHOD

The four main tasks of the students were:

1. To carry out a sociological census. This involved collecting basic demographic data by individuals and households with data on intervillage movements, number of trees used for cash cropping, languages spoken, material possessions, education and employment histories and annual incomes and expenditure.
2. To fill in daily time sheets on how men and women in the village over the age of 16 spent their time. Each day a different person's activities were noted for every day of the week. Categories were made for sleeping, resting, group discussion, eating (regular and feasting), travelling (method and purpose), subsistence and cash cropping (16 divisions), and many other socio-economic activities.
3. To fill daily record sheets of who worked in selected gardens and what activities they carried out. This was an attempt to measure the labour input per unit area. Most students selected two or three gardens at different stages of maturity so that for the period they were in the village, records were kept of labour expended on areas averaging just over one acre.

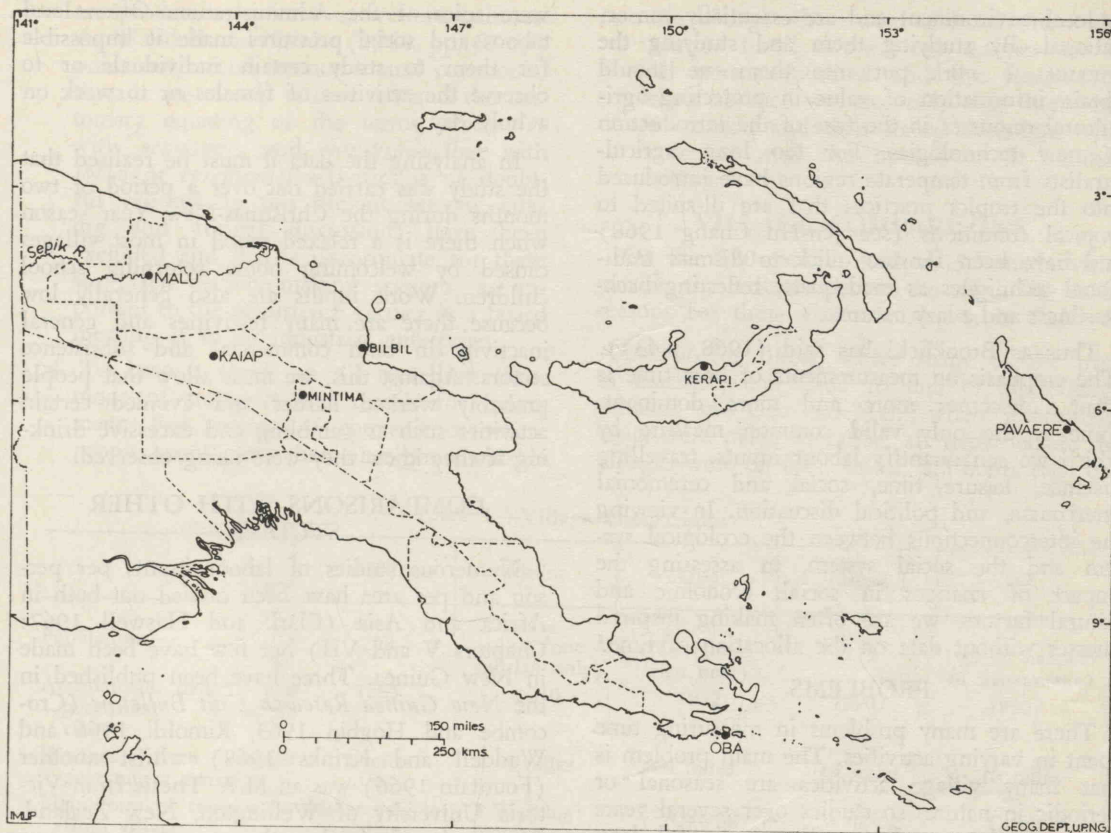


Figure 1.—Location of study villages.

4. To write a long essay on the village, its environment, its people, gardening techniques and practices, livestock, diet, cash cropping, individual incomes and expenditures, transportation and schooling. The bias in these essays was to highlight indigenous categorisation of the village environment and socio-economic problems, rather than to be merely descriptive. One such essay has already been published (Alaluku 1970).

Students were also expected to keep a field diary and to keep in touch with the supervisor by post at least once a fortnight. These tasks were carried out under the supervision of the writer, who visited each student in the field at least once.

PURPOSE OF THE PROJECT

This article deals only with the activity studies. The basic aim here was to seek answers to questions such as whether 'the requirements of the subsistence sector of the economy imposes limitations on the expansions of activities in the monetary sector and, conversely, whether participation in the monetary sector involves restrictions on subsistence activities' (Waddell and Krinks 1968:xix).

More generally, activity studies may provide a valid method for making interregional comparisons. This is important because socio-economic practices at the village level affect the degree of acceptance of cash cropping and traditional agricultural practices are relevant to the successful introduction of cash cropping. Some traditional systems of agriculture show close adjustments

to local environment and are essentially conservational. By studying them and studying the amount of work put into them we should obtain information of value in protecting agricultural resources in the face of the introduction of new technologies. For too long, agriculturalists from temperate regions have introduced into the tropics practices that are ill-suited to tropical conditions (see Jen-Hu Chang 1968) and have been far too quick to dismiss traditional techniques as inadequate, reflecting backwardness and a lazy nature.

Thus as Brookfield has said (1968, p.434), 'The emphasis on measurements of how time is spent... becomes more and more dominant. Time is the only valid common measure by which we can quantify labour inputs, travelling distance, leisure time, social and ceremonial intercourse, and political discussion. In viewing the interconnections between the ecological system and the social system, in assessing the impact of changes in social, economic and natural factors, we are often making inspired guesses without data on the allocation of time.'

PROBLEMS

There are many problems in measuring time spent in varying activities. The main problem is that many village activities are seasonal or periodic in nature, so studies over several years are required to produce really meaningful data. Also in this particular study proper sampling procedures were impossible because villages were chosen solely on the basis of having University students who were willing to do the work: in this sense each village is probably atypical. Related to this was the fact that it was often impossible to separate certain activities. For example, while cooking an evening meal, a woman may be minding children, making a string bag and talking, while a man may combine a hunting trip with a visit to a sago patch or a potential garden site. The best that could be done was either to divide total time spent among the different activities or to count only the predominant activity.

There were many problems for the students even though they were working in their own society. Naturally they were unable to observe all activities all the time and they had to be careful not to cause offence in their own societies: initially it was felt that some of them

were spies of the Administration. Often local taboos and social pressures made it impossible for them to study certain individuals or to observe the activities of females or to work on a holy day.

In analysing the data it must be realised that the study was carried out over a period of two months during the Christmas-New Year season when there is a relaxed mood in most villages caused by welcoming home returning school children. Work inputs are also generally low because there are many festivities and general inactivity in both commercial and subsistence sectors. Against this, we must allow that people probably worked harder and avoided certain activities such as gambling and excessive drinking if they knew they were being observed.

COMPARISONS WITH OTHER STUDIES

Numerous studies of labour inputs per person and per area have been carried out both in Africa and Asia (Clark and Haswell 1967: Chapters V and VII) but few have been made in New Guinea. Three have been published in the *New Guinea Research Unit Bulletins* (Cromcombe and Hogbin 1963, Rimoldi 1966 and Waddell and Krinks 1968) whilst another (Fountain 1966) was an M.A. Thesis from Victoria University of Wellington, New Zealand. The results obtained in the present survey were very similar to these earlier surveys although the methods of obtaining the data were somewhat different. The main aims in this survey were as follows:

1. To obtain data in contrasting villages in the Territory for comparative purposes. Some differences between the villages are shown in *Table 1*.
2. To actually observe most activities and to measure all activities to the nearest 10 minutes. This means that short rests during particular activities are not included with the activity.
3. To keep track of all activities including eating, resting, sleeping and talking during a 24-hour day. Because of widely differing degrees of success among the students, these categories are excluded from the present discussion but it is obviously unsatisfactory to restrict such a study to what

are productive spheres in western cultures. As Waddell and Krinks (1968, pp. 67-69) point out, social, economic and ceremonial threads are closely interwoven and the customary equating of the terms *productive* with *economic*, and *non-productive* with *social* or *ceremonial* activities is of doubtful validity. In this present exercise talking and formal discussions have been excluded and this is unfortunate for these are often decision-making sessions, as important to the subsistence farmer as a board meeting is to an industrial enterprise.

4. To keep a check on all travelling time, mode of transport and reason for movement. For reasons of convenience where people spent more than nine hours outside

the village they were deleted from the sample. In all, this was only 2.8 per cent of all persons studied and the reason for their absence was normally that they went to market and then stayed the night with someone near the market or in another village.

VILLAGE COMPARISONS

Of the 320 people studied, 92 made visits outside the village during the day. The main reasons for these visits are shown in *Table 2*.

Except for Bilbil, where many of the trips to market were made in one of the village vehicles, and Oba and Malu, where intervillage visits were made in canoe, all trips outside the villages were on foot. In all, 2.7 hours each day

Table 1.—Village Comparisons

....	Bilbil	Mintima	Kaiap	Pavaere	Oba
Population	298	222 (one subclan only)	146 (Lokai clan only)	135	43 (a hamlet of Sauasauaga)
Approximate date of first permanent European contact	1885	1930	1932	1890?	1890?
Distance from nearest government centre	7 miles	6 miles	6 miles	14 miles	10 miles
Main form of travel away from village	Motor vehicle; walking	Walking; motor vehicle	Walking	Walking	Canoe; launch
Main staple in rank order	Taro Yam	Sweet potato	Sweet potato	Taro Yam	Taro Yam
Main cash crop in rank order	Coconut	Coffee	Coffee Pyrethrum	Cocoa Coconut	Coconut
Altitude (in feet)	On beach	5,000	7,000	800	On beach
Approximate average annual rain (inches)	140	90	116	120	108
Wettest season	Nov-May	Jan-April	Sept-April	Jan-April	March-June

Table 2.—Reasons for travel outside villages

....	Percentage of all visits outside village				
	Oba	Bilbil	Pavaere	Mintima	Kaiap
Selling produce	25	12	96	31	38
Church or meeting ....	....	6	....	35	....
Buying	13	41	4	4	25
Visiting	62	6	....	19	13
Visiting sick or getting treatment	....	18	....	....	13
Paid work ....	....	18	....	4	6
Trading trip ....	....	....	....	8	....
Government business ....	....	....	....	....	6

were spent in all forms of travel with much of the intravillage travel made up of visits to the gardens. Obviously much of the casual walking around the village was missed for the travel time counted only includes those occasions when walking or travel was an integral part of one of the activities measured (cf. Waddell and Krinks 1968: iii and 1969 were in the two villages studied 18 per cent and 25 per cent of all activity time was spent in travel).

A synopsis of the results is shown in *Figure 2* (for the average results of all villages) and *Figures 3 to 5* (for some individual villages). Full circles would represent an average 24-hour day: the half circles shown in the diagram represent a 12-hour day. Diagrams show males and females separately.

Activities obviously have to be grouped and the following categories were made:

1. Travel—

- (a) Travelling to and from garden
- (b) Other movement within the village
- (c) Travel outside the village when the person concerned spent the greater portion of the day in his own village

2. Subsistence gardening—

- (a) Clearing
- (b) Digging and planting
- (c) Weeding
- (d) Fencing
- (e) Care of crops
- (f) Harvesting
- (g) Processing

3. Other food sources and non-food gathering—

- (a) Sago
- (b) Fishing
- (c) Hunting
- (d) Food gathering
- (e) Collecting non-food items

4. Cash cropping—

- (a) Clearing
- (b) Planting
- (c) Weeding
- (d) Care of crops
- (e) Fencing
- (f) Harvesting
- (g) Processing

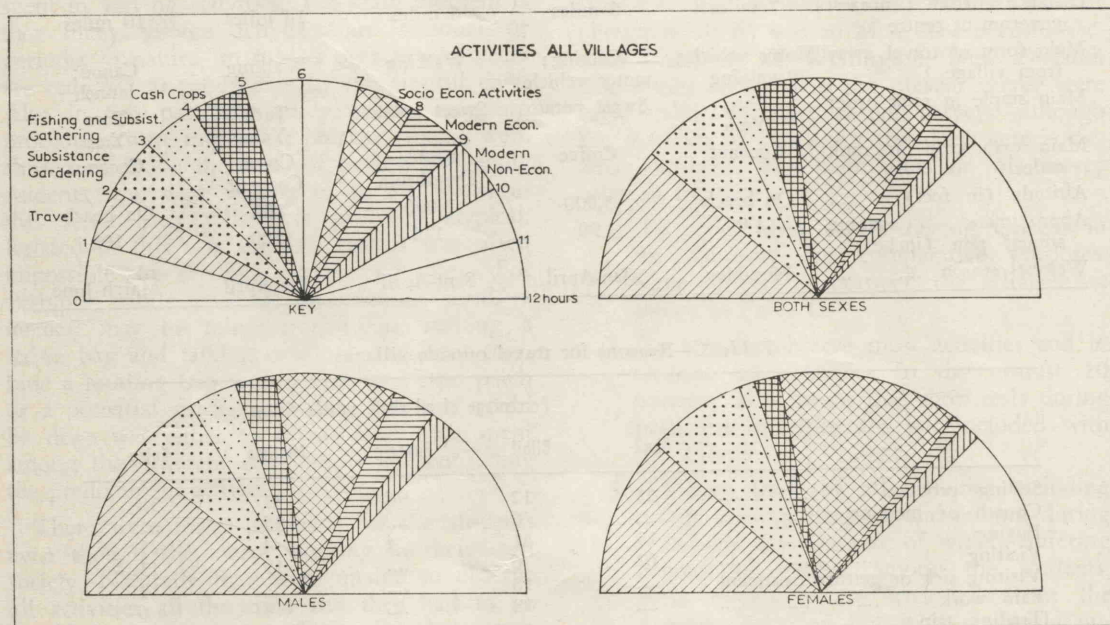


Figure 2.—Average activities in all villages.

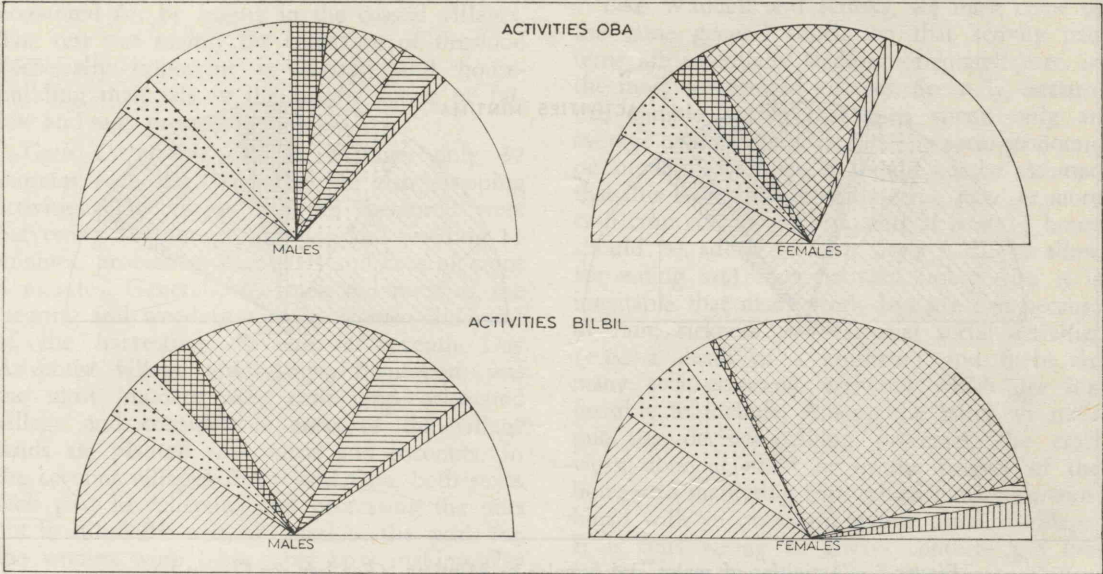


Figure 3.—Activities of males and females at Oba and Bilbil. (For key see Figure 2.)

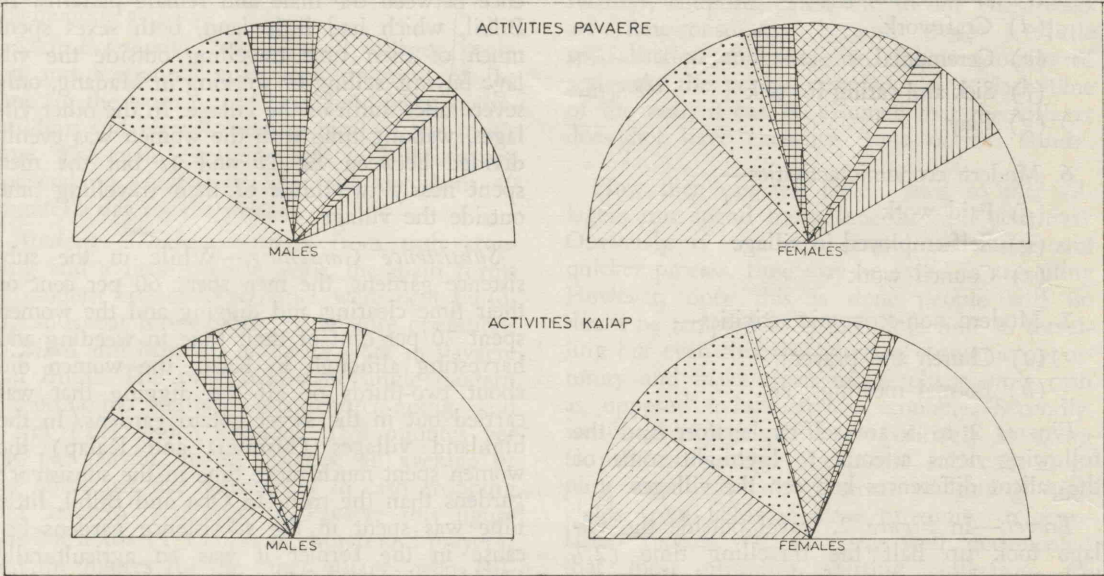


Figure 4.—Activities of males and females at Pavaere and Kaiap. (For key see Figure 2.)

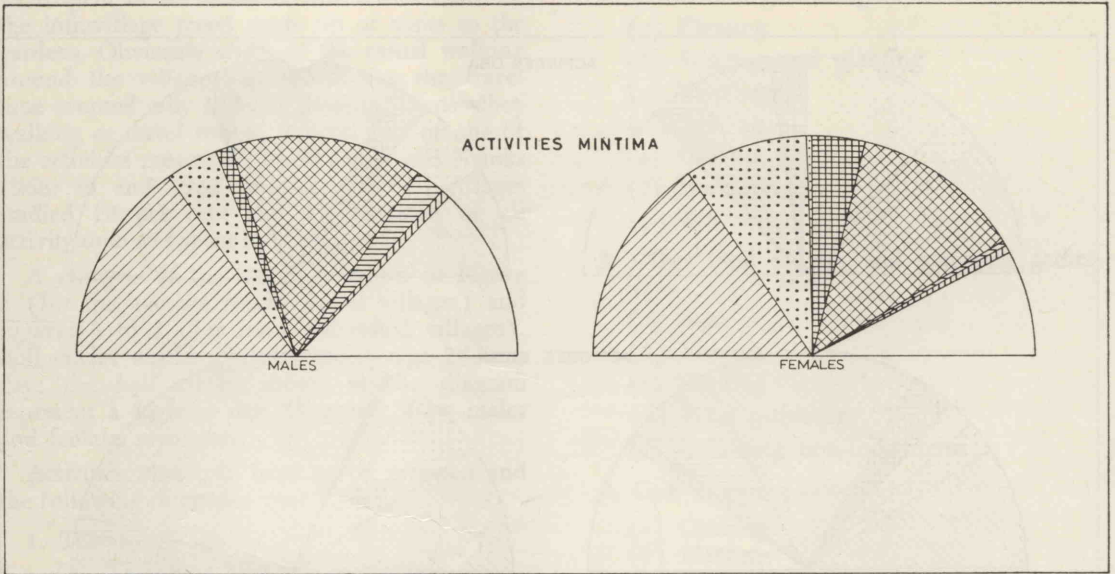


Figure 5.—Activities of males and females at Mintima. (For key see Figure 2.)

5. Other socio-economic activities—

- (a) Cooking
- (b) Household tasks
- (c) Housebuilding
- (d) Craftwork
- (e) Ceremonial
- (f) Sick and caring for sick
- (g) Play

6. Modern economic activities—

- (a) Paid work
- (b) Self-employed in village
- (c) Council work

7. Modern non-economic activities—

- (a) Church and prayer
- (b) Formal meetings, etc.

Figures 2 to 5 are self-explanatory and the following notes attempt to highlight some of the salient differences between the villages.

Travel.—In Figure 2, travel outside the village took up half the travelling time (2.7 hours) and the rest of the travel time was divided evenly between travel to gardens (1a) and other movement within the village (1b).

The total travelling time was approximately the same for all villages except Mintima where both men and women spent nearly four hours of each day walking. In Pavaere there was little difference between the male and female patterns. In Bilbil, which had little land, both sexes spent much of their time travelling outside the village buying, selling or working in Madang, only seven miles north of the village. In the other villages, walking time with the women was evenly divided between 1a, 1b and 1c but the men spent nearly two-thirds of their travelling time outside the village.

Subsistence Gardening.—While in the subsistence gardens, the men spent 60 per cent of their time clearing and digging and the women spent 70 per cent of their time in weeding and harvesting although in Kaiap the women did about two-thirds of all the digging that was carried out in the sweet potato gardens. In the highland villages (Mintima and Kaiap) the women spent much more time in the subsistence gardens than the men. In Oba and Bilbil, little time was spent in the subsistence gardens because in the former it was an agriculturally 'slack' period and fishing was important and in the latter the village had little gardening land and much of the food was obtained from stores.

Other Food Sources and Non-Food Gathering.—Most of this category in Figure 2 was accounted for by fishing in the coastal villages. The rest was mainly the collection of firewood (especially important in Kaiap) and house-building materials in the nearby forest or fallow and sago processing in Malu.

Cash Cropping.—On an average, only 37 minutes each day was spent in cash cropping activities. The major activities measured were harvesting 12 minutes, clearing and weeding 11 minutes, processing 8 minutes and care of crops 4 minutes. Generally the men did most of the clearing and weeding and the women did most of the harvesting. Pavaere, a Seventh Day Adventist village near Arawa Plantation, was the most 'modern' and cash crop orientated village and considerable areas of the village lands are planted with cocoa and coconuts. In the coconut villages, Bilbil and Oba, both sexes took part in collecting and processing the nuts but in Bilbil the men did most of the work for the women were presumably busy making clay saucepans for trade or cash. In this sense a traditional socio-economic task takes on the characteristics of a modern task. Interestingly, in Mintima much of the harvesting and processing of the coffee harvest is 'women's work', whereas in Kaiap women have very little involvement in any modern activity.

Socio-Economic Tasks.—In all villages, cooking and household tasks took up most of the time for the women, and household tasks, house-building and repairs took up most of the men's time. The main exception was in Bilbil where pot making (craftwork 5d) took up about 40 minutes a day for the women.

Modern Activities.—Apart from cash cropping and a little council work, the main forms of modern economic activities were boat building and boat hire in Oba, trade store operations in Bilbil and Mintima and paid work in Pavaere and Bilbil. The most important single modern non-economic activity was church-going and prayer (7a) which averaged 21.4 minutes per day per person. In all villages, an average of 1.5 hours per day were spent in cash cropping and 'modern' activities. In Pavaere this figure was 2.8 hours (1.3 hours in church and prayer), and the figures for the other villages were Bilbil 1.7 hours, Oba and Mintima 1.1 hours and Kaiap 0.7 hours.

CONCLUSIONS

Like Waddell and Krinks, we must come to the same general conclusion that activity patterns are essentially tradition-orientated even in the most westernised villages. Secondly, because this sample shows that men spend only an average of nine hours each day in socio-economic or 'modern' activities, it should not be assumed that this leaves plenty of time for 'new' or more cash crop activities. For a start at least 1½ hours should be added to each day's work to allow for eating and rests between tasks. Also it is inevitable that many work-days are lost because of rain, sickness and essential social activities (e.g., a death of a kinsman) and there are many socio-economic activities which are impossible to include. Among the latter we must put the decision-making processes, the craft work done at night or in the privacy of the home and marketing trips which have been combined with an overnight stay in another village. It is thus wrong to always conceive the low labour input per day as 'leisure preference' (cp. Clark and Haswell 1967, p.133). The very nature of subsistence agriculture means that the subsistence farmer can only spend a little time each day in food-producing activities because he must be his own doctor, house builder, manufacturer, landlord, priest and so on. These tasks are time-consuming because there is little specialisation and there are few economies of scale. As the period sampled was a slack time of the year, it can be assumed that the villager does not have excessive 'time on his hands'.

How then can we 'create' time so that villagers can spend more time in cash activities? Obviously if we make travel an easier and quicker process, time may be saved in travelling. However, once this is done people will no doubt be tempted to spend more time in travelling but even this will increase economic opportunity and make them more reliant on a cash as opposed to subsistence economy. Secondly, we could experiment more positively in trying to make subsistence agriculture and cash cropping more efficient in terms of getting high yields from fields in close proximity to population centres. (It is fairly well documented that most primitive shifting cultivators are extremely efficient in terms of labour.) Thirdly, more 'services' (e.g., medical, water supply,

education, retailing outlets) could be provided at a village level so that less time had to be spent on socio-economic activities.

Finally the greatest need is to provide sufficient incentives so that individuals are prepared to use some of their leisure and recreational time in new activities. In this context there is a real need for prices for cash crops to be reasonable yet stable and for villagers to be offered something more than trade goods at the local level.

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